UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,668	06/27/2003	Jon S. McElvain	D/A3048	8040

25453 7590 04/04/2007 PATENT DOCUMENTATION CENTER XEROX CORPORATION 100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR ROCHESTER, NY 14644	**EXAMINER** KAU, STEVEN Y

ART UNIT	PAPER NUMBER
2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/607,668	MCELVAIN, JON S.
	Examiner	**Art Unit**	
	Steven Kau	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*27 June 2003*</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-12*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-12*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*27 June 2003*</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>*6/27/2003*</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   The information disclosure statement (IDS) submitted on June 27, 2003, is in

compliance with the provisions of 37 CFR 1.97. However, only item stated in the IDS

not being considered is Xerox Attorney Docket N0. D/A3050, because there is no D/A

3050 submitted for application prosecution consideration. Xerox Attorney Docket N0.

D/A 3048 (current application docket number) is being considered. Accordingly, except

for D/A 3050, the information disclosure statement is being considered by the examiner.

Drawings

2.   The drawings (Figures 2 & 3) are objected to under 37 CFR 1.83(a) because

they fail to show "illustrates outlining around a tinted line art object on a fill object" and

"its corresponding hint data" as described in the specification. Any structural detail that

is essential for a proper understanding of the disclosed invention should be shown in

the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR

1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary

to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hoel et al (Hoel) (US 4,942,541) in view of Nakagome et al (Nakagome) (US 4,115,815)

and Ushida et al (Ushida) (US 5,644,366).

With regard to claim 1, Hoel discloses a page printing system, in that he teaches

a method of improving edge rendering of objects containing run length encoded image

pixel data, comprising: collecting (e.g. storing) an upper run-length encoded scanline

and a lower run-length encoded scanline (col 9, lines 13-25), wherein each scanline

includes a string of first runs of pixels corresponding to a first object (e.g. picture

elements- pixels), a string of second runs corresponding to a second object and each

run is specified by a minimum position in a horizontal direction (col 3, lines 22-32), a

length in pixels (col 2, lines 15-21) and a color (e.g. black & white, col 2, lines 15-21);

wherein the first object has associated with it a first tag plane (e.g. multi-plane

application) for defining rendering hints for rendering the first object (col 9, lines 51-67 &

col 10, lines 1-3); wherein the second object has associated with it a second tag plane

for defining rendering hints for rendering the second object (col 9, lines 51-67 & col 10,

lines 1-3);

Hoel differs from claim 1, in that he does not teach inspecting each run transition.

Nakagome discloses a facsimile signal coding method, in that he teaches

inspecting (e.g. identify) each run transition (e.g. between white and black, Figure 2, col

3, lines 44-67 & col 4, lines 1-7), wherein a run transition comprises a point where one

object (e.g. picture element B, col 3, lines 55-56) run ends and another object run

begins on the scanline (Figure 2, col 3, lines 44-65), and identifying an interesting run

located at the run transition (col 3, lines 49-50), wherein an interesting run has at least

one of a specified tag and specified contone value (e.g. picture element, col 3, lines 44-

65); for each run transition involving an interesting run, inspecting (e.g. identify, col 5,

lines 4649) pixels located in each of the upper and lower scanlines and right and left of

the run transition and, based on the position of the inspected pixels relative to one

another, determining (e.g. read and store, col 5, lines 46-67 & col 6, lines 1-23) if the tag

values associated with the surrounding runs should be modified, and specifying (e.g.

read and store, col 5, lines 46-67 & col 6, lines 1-23) number of pixels (e.g. information

of scanlines) to vary the corresponding tag planes (col 5, lines 42-67 & col 6, lines 1-

23); and if the tag plane of one of the objects corresponding to the intersecting runs is to

be dilated in the horizontal direction, a new run is inserted at the run transition having

the specified number of pixels in length and the tag value of the object to be dilated (e.g. modification, col 5, lines 37-41); and the tag plane of the other object is decreased by removing the specified number of pixels in length from the run adjacent to the interesting run (e.g. modification, col 5, lines 37-41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hoel to include inspecting each run transition taught by Nakagome to provide efficient transmission or storage of signals having a two-dimensional correlation communication (col 1, lines 4-7).

With regard to claim 2, Hoel teaches that the new run is at least one pixel in length (col 2, lines 16-22).

With regard to claim 3, Hoel teaches that the new run is two pixels in length (col 2, lines 16-22).

With regard to claim 4, Hoel teaches that the new run is three pixels in length (col 2, lines 16-22).

With regard to claim 5, Hoel differs from claim 5, in that he does not teach if a tag plane needs to be modified in the vertical direction; if the tag plane of the object associated with the interesting run is to be dilated and the tag plane of the object associated with the other run is to be contracted in the vertical or slow scan direction, the other run is subdivided into two separate runs, and the subdivided portion adjacent to the interesting run is assigned the tag value of the interesting run; and repeating this for a number of times equal to the specified number of pixels for the runs adjacent to the other run in the vertical direction

Ushida discloses an image reproduction method, in that he teaches if a tag plane needs to be modified in the vertical direction (col 12, lines 12-33); if the tag plane of the object associated with the interesting run is to be dilated and the tag plane of the object associated with the other run is to be contracted in the vertical or slow scan direction, the other run is subdivided into two separate runs, and the subdivided portion adjacent to the interesting run is assigned the tag value of the interesting run (col 18, lines 15-39); and repeating this for a number of times equal to the specified number of pixels for the runs adjacent to the other run in the vertical direction (Figures 2-3, col 5, lines 9-16).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hoel to include teach if a tag plane needs to be modified in the vertical direction; if the tag plane of the object associated with the interesting run is to be dilated and the tag plane of the object associated with the other run is to be contracted in the vertical or slow scan direction, the other run is subdivided into two separate runs, and the subdivided portion adjacent to the interesting run is assigned the tag value of the interesting run; and repeating this for a number of times equal to the specified number of pixels for the runs adjacent to the other run in the vertical direction taught by Ushida to enable an optimum expansion/compression process to be performed on a character/line image and a halftone image (col 2, lines 1-4).

With respect to claims 6, 7, and 8, Hoel teaches that the number of scanlines modified are equal to at least one, to two and to three (col 23, lines 55-60).

With regard to claims 9 & 11, Hoel differs from claims 9 & 11, in that he does not teach that the first object comprises a white object and wherein the second object comprises a non-white object.

Nakagome teaches that the first object comprises a white object and wherein the second object comprises a non-white object (Figure 2, col 3, lines 44-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hoel to include the first object comprises a white object and wherein the second object comprises a non-white object taught by Nakagome to provide efficient transmission or storage of signals having a two-dimensional correlation communication (col 1, lines 4-7).

With regard to claims 10 & 12, Hoel differs from claims 10 & 12, in that he does not teach that the white object is at least one of a text object and a stroke object and the non-white object is at least one of a fill object, an image object and a sweep object.

Nakagome teaches that the white object is at least one of a text object and a stroke object and the non-white object is at least one of a fill object, an image object and a sweep object (Figures 1-5, col 2, lines 32-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Hoel to include the white object is at least one of a text object and a stroke object and the non-white object is at least one of a fill object, an image object and a sweep object taught by Nakagome to provide efficient transmission or storage of signals having a two-dimensional correlation communication (col 1, lines 4-7).

Correspondence Information

5.   Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement is traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is (571) 270-1120. The examiner can normally be reached on Monday to Friday from 8:30 AM – 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

S. Kau
Division: 2625
March 23, 2007

TWYLER LAMB
SUPERVISORY PATENT EXAMINER